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### Sewage Handling and Disposal Advisory Committee

December 11, 2009

### **Draft Meeting Minutes**

### Attendance:

Member Attendees	Non-Member Attendees
Mike Lynn	Dave Tiller
Colin Bishop	Tom Ashton
Bob Lee	Dwayne Roadcap
Robert Wadsworth	Jim Bowles
Barrett Hardiman	Duke Price
Allen Knapp	
V'lent Lassiter	
Bill Keeling	
Bill Timmons	
Vincent Day	
Valarie Rourke	
Jim Pyne	
Dave Fridley	
Joel Pinnix	
Joe Lerch	
Greg Evanylo	
Ray Freeland	

See Appendix 1 for a copy of the Draft Agenda.

### Motion to approve, seconded, agenda approved.

Committee did not have copy of minutes from 9/18/09 meeting so group decided to approve minutes at the next meeting.

### **New business**

New business. Emergency Regulations:

Status report on the regulations. Allen Knapp. The regulations are under review, submitted to the Dept. of Planning and Budget. DPB approved the regulations and sent them to secretary of health & human resources for review, if approved there, then go to Governor, and if Governor approves, HD asked for effective date of March 1, keeping with APA, can be effective upon filing or later date if specified by agency, the extra 2 months would be advantageous on implementing, getting web-based capability up & running, at this point,

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hurry up and wait, we're in an odd and uncomfortable place. Some want to discuss the regs: how are you going to implement this? Normally in the regulatory process, VDH is not talking about the regulations because they are under a period of review. Need to wait for the outcome. Because of the 30 day comment period and open process, the regulation is better, but it has raised expectations on our ability to communicate during this process. With the exception of the public documents, we are not in a position to discuss the regulations. VDH published two versions of the regulations and a summary of the comments. Committee also received a summary of the changes (see Appendix II).

Four broad comment areas for the Emergency regulations:

- 1. Nitrogen
- 2. Sampling
- 3. Technical basis, loading rates
- 4. Licensed operators to visit the system—HD does not have authority to change, requirements for becoming an operator are with DPOR, DPOR regulations do not provide a special exemption or pathway for a licensed operator.

### **Highlights of changes in summary document:**

**Definitions for ammonia were deleted.** No longer needed, drew back on the requirements, added definition for limiting feature, received a lot of comments about the loss of power as a reportable incident, we dropped that from the definition, changed to TL-2, TL-3 effluent from secondary and tertiary effluent, VDH invented its own terminology like many other states have done. VDH modified definition of total nitrogen.

Section 40, relationship to other regulations, a lot of confusion about how this regulation relates to the SHDR, tried to add clarity, for septic effluent systems, Table 5.4 is the controlling table, for TL2 and 3, the loading rates from the emergency regulations will apply.

Section 60, removed Nitrogen requirements except for large systems, added requirement that if you are going to use land area as part of Nitrogen management, then you will have to record and dedicate it.

Section 70.A, this gets into the loading rate changes, loading rates in Table 1 are for pressure dosed systems, there is an expectation to reduce design loading rate for those systems that do not pressure dose.

Old table on percentage of Ksat was dropped in favor of a straight hydraulic loading rate, it mentions percolation rates and Ksat, we are not trying to preclude the use of Ksat, just reflecting current practice, as we move forward with permanent regulations, we can explore some of these areas, the loading rate chart for TL-2 is taken from EPA design manual, TL-3 is based on our experience in VA, approved with GMP #147, highest loading rate is 3 gpd/ft2. That was a fairly major change from what was originally proposed.

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Section 70.A.9: Need a minimum of 12 inches of cover, establishes the performance requirements, it is rather long, A.12, fecal coliform performance requirement to be achieved at the bottom of the vertical boundary, when disinfection required, the standard is 200 cfu/ml.

Section 70, a lot of renumbering because of fewer tables, removed BOD, TSS and ammonia limits, and added a maximum organic loading rate to that chart.

Section 70.A.15, clarification that we are looking to total nitrate nitrogen, and the Nitrogen management for systems larger than 1,000 gpd.

Section 70.A.18, new section, the nitrogen questions are not going away, we will evaluate system designs for nitrogen removal as funding may be available.

Section 70, A.19, addresses fill material, whenever it is being used to increase separation

Subsection E, in Section 70, have to be sealed by PE unless prepared under an exemption, in which case the designer must certify that the plans were prepared under that exemption.

Section 80, monitoring and sampling, took out requirement for TSS and total Nitrogen requirements, intended to reduce the cost, changed the submittal date from 10<sup>th</sup> to 15<sup>th</sup> of the month.

Section 90, added subsection B, facilities larger than .04 mgd, o&M in accordance with the manual, struggled to tie larger systems into DEQ sampling and reporting requirements.

Section 140, subsection B, allows for reduction of staffing requirements with division director approval.

On the agenda, "substantive requirements", no specific presentation, if any question, we can see about what we can do as far as dialogue, segway into implementation of regulations, perhaps this committee could put together a subcommittee to help advise, local government may have a list, HBAV would like a bullet point list of requirements.

Bob Lee: VDH did a great job of listening to the comments and making changes.

Item #3: Attorney General Opinion:

Del. Scott wrote to attorney general to ask the question about HB 1788 that has two subsections to 15.2-2157, local government provision in the code, it says that local government cannot prohibit use, subsection d can't regulate operation and maintenance more stringent, paraphrased. Subsection D, read it and see what you think. Enactment clause that says it will take effect upon final regulations. What is final promulgation? Does the emergency regulation promulgate or is it some other provision? Adoption of the emergency regulations will trigger the applicability of C&D. Point of information on where we are.

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Attorney-General is not a judge and the clarification is helpful. What's more stringent, what's not? Questions of the future.

Implementation of the Emergency Regulations: What do we expect? Is there an implementation plan that the state can put out? Those are the things that would be helpful, whole bunch of operators that need training? What do we have to do for the state? With regards to operators, DPOR has a similar requirement for the regulations. What does the operator have to do to report, what kind of report does VDH want? Is the start date for existing systems do for a relationship on March 1? How do we bring all of the systems into the fold?

EH Managers are preparing inventory plans. The Division needs to review the plans and give feedback to the managers. Need to find the systems, new ones are easy. We estimate 60,000 alternative systems. Some are way ahead and know where they are, some don't. One focus is to inventory systems. Put together internal implementation group to look at the issues Bob Lee mentioned. Writing guidance documents. Dave Tiller is heading up that effort.

Dave Tiller: We do not know how regulation will look at this point, group is going through the regulation section by section, looking for clarification needs, how we would process applications, PE under 163.6, maybe taking statement from GMP 146 about Level 1 and 2 reviews. Clarifying relationship with operators, coming up with forms for new and existing systems, came up with a lot of questions, working on answers. Large, alternative, mass drainfield, maintenance permits vs. repair permits, clarifying project areas, single owner concepts, reference to the appeals process, creating forms dealing with project area for management of Nitrogen, what kind of forms do we need for well lot protection, recordation documents, had one meeting to date, asked managers and staff to read the regulations and offer their questions, put answers in implementation manual. That is what we are trying to do.

How can you tell homeowners who they can contract with? Who am I supposed to call? That's an interesting question. For years, maintained a list. DPOR takes a different approach, they have a look up feature, but you have to ask them for a list of their licensees, we are working with DPOR on implementation issues, we are trying to get them to give us the list so we can have a drop down list so we can have a list on our website. We cannot recommend anybody. Best we can do is get the list from DPOR.

Jim Bowles has taken over the web-based reporting. Working on prototype for well drillers to submit GW-2 over the internet. That works, but has not been put out for wide circulation, trying to expand that for operator reports.

Jim Pyne: what kind of head-aches do I have? You are asking for fecal coliform, holding time limit, have to sample in the morning so that they can get it to lab by afternoon, chain of custody to deal with, lab certifications wanting to be certified, how do you notify operators if lab loses its certifications, plant operators got dinged for using an uncertified lab, your O&M

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manual reviewed and approved, the major chore is the data handling, reams of operational data for regulatory purposes, the lab and sampling alone is a big project.

Would it be helpful to have a sub-group to work through these issues. Budget times, GA session, what's the will of committee? We're going to do the implementation either way, we welcome the input, what do folks think? What assistance can we offer to VDH?

Knapp: the VDH group met just the other day, they asked where does enforcement fall? It would have to fall down the ladder of priorities, needed an inventory, needed to let people know about the requirements, operator community up to speed, 90% of our effort in first year having little to do with enforcement. In Loudoun, they are already into enforcement, we can't start on Day 1 writing tickets. Need to get our arms around the new program.

In developing the final regulations, what is the resource constraints? How to cover those gaps? Are the fees and the budget adequate for this program?

Knapp: What we've said all along, the arrival of this program, is that we'd love to have more staff, but that's not reality, the program is changing from health department delivering direct service to private sector doing it. As we transition away from direct service to regulatory, we're re-orienting our staff for a new job. We think we can do it. It won't be perfect but we have the capability to do it.

Committee would like to stay informed on the implementation group.

Pinnix: Implementation and rolling this out, consistency with local health districts, what kind of direction are you giving in terms of local ordinances and the Chesapeake Bay requirements for 100% reserve? The statute may pre-empt all local ordinances, including Chesapeake Bay. That won't be well received. I don't see anything in the final regulations about this issue.

Lassiter: Section G, 613-120, #7. Section 120.G. Last section before Section 130.

Knapp: We are not moving to interpret local ordinances, we feel like that is the locality's job, we are not planning to evaluate every local ordinance, the Chesapeake Bay is a specific request by DCR to limit whatever damage might get done. It's written as owner responsibility. DCR is comfortable with the language.

Pinnix: Ok, but that doesn't appear to affect design issues. It seems there is an inconsistency, requirement of reserve area, that's under design and permitting rather than owner responsibilities. I think we need a reference in Part II for this. Maybe something in applicability and scope, something more than you currently have.

Hardiman: can work on this in the future.

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Pinnix: If Chesapeake bay is a local ordinance, why would VDH enforce a pre-empted local ordinance? It's a thought and concern.

Lerch: Bay act requires adoption. I don't see a conflict. Approved by state board, I don't see the conflict.

Pinnix: Local ordinance are pre-empted.

Lee: Second page of the OAG decision, requirement for alternative onsite sewage systems that exceed those under or established by the VDH. For alternative systems, what is the local ordinance going to do? Won't affect conventional systems.

Pinnix: It says "other requirements."

It's unclear whether the local ordinance for O&M of onsite sewage systems or whether it's tucked into the land planning requirements. There is different ways to put things into the ordinance.

Hardiman: Chesapeake Bay is statutory requirement.

Lerch: What is a requirement that we are talking about?

Lynn: 100% reserve.

Committee debating the meaning of the code. Advice for the permanent regulations.

Knapp: Group would like to get something from implementation manual. If March 1 is the implementation date, then the committee may want an earlier meeting,

Tiller: Meeting December 22 and January 6, we're about half way through the regulation right now. VDH review team could have something substantive by mid-January.

Hardiman: How about we get something from the health department and then decide whether a meeting is necessary. Health department will send committee something by email, try to have meeting as early as possible in March.

Lynn: Operators can under-cut pricing knowing that enforcement won't happen. People got licenses, unfair market on pricing because some will take advantage knowing that health department enforcement won't happen.

Knapp: Ok, under advisement. We have three worlds, some with complete inventory, notified owners, and identified owners who have not complied with requirements, they are ready to go, our guidance might want to consider the state of the locality. Philosophically, I was suggesting that enforcement was not where we were going to start implementing O&M expectations.

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Bishop: Mike's point is valid. It's very problematic when guys are competing against windshield inspections. Enforcement is all or none proposition.

Hardiman: Item #2 on the Agenda, recommendations to the department on the permanent regulations, how to move forward advice. We should come up with a strategy for going through the regulation.

Knapp: the emergency regulation action was embedded into the permanent regulation. In the end, decision was to go forward with the emergency regulation, the permanent regulation will just replace the alternative regulation. The other regulation is still on-going, I'm starting to like the idea of targeted regulatory changes. Right now, NOIRA for re-write of the regulation, separate regulation.

Pinnix: New NOIRA?

Knapp: The NOIRA has been filed, if you look on Townhall, the permanent regulation is the carry-forward of the emergency regulations for the alternative regulations.

Lee: What does this regulation mean? Design beyond what's here? I think it seems the big regulation had its merits, you could attach the strings for residuals, disinfection, re-use, go down the line, there is a whole bunch of things that could be related.

Knapp: Read the NOIRA and background document, not as comprehensive as you are expecting. The big-re-write is comprehensive. October 08 NOIRA said we were going to rewrite the regulation. The emergency regulation just applies to alternative. The permanent regulation is subject to full APA process. The BOH meetings in the future, APA says we have to have permanent regulation in place within 12 months, the BOH meets 1/29, 4/23, 7/16, 10/15. I haven't created calendar, but I think the 10/15 meeting will be too late, we'll develop better timeline for permanent regulations to go to BOH at proposed and final stage, we have to accommodate that schedule.

Knapp: Narrows scope of the job. I think Bob Lee was asking whether the prescriptive requirements of the SHDR should be moved into alternative regulations. That's a good question. There is not any new timetable on moving forward with the 08 NOIRA. I want to look at breaking the regulation into smaller parts. For instance, the Administrative part needs to be revised, our business process, that's already written, we could notice that and move it forward as a stand alone regulation.

Pinnix: Suggestion, regulation in final form, working on implementation manual, it would be beneficial to set up a series of meeting across the state, inviting everyone, this is such a sea change, would get the information out in a consistent format.

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Hardiman: Sounds like everyone ok moving forward on alternative regulations, anyone have suggestions on creating smaller groups? Would we prefer to wait until the implementation manual is done before meeting again?

Knapp: I imagine that we won't have money to hire the Institute for Environmental Negotiation this time around. I've heard only positive comments about that process, just curious whether the committee has another process for input on the final regulation.

Knapp: For instance, could put a technical ad-hoc committee together to get into the details deeper. First group was very broad based with citizen, manufacturer, etc. input. I've heard that a technical group would be good. I think we would need to take a proposed permanent regulation to the Board of Health by April 2010. There is a review process, 60-day comment period. We should have a proposed regulation by then. That doesn't leave a lot of time. APA gives option for 6-month extension.

Lerch: If you want a smaller technical committee, you would need that input now.

Hardiman: Issues: Ksat issue, requirements don't contradict Chesapeake Bay.

Lassiter: DCR was looking at pump outs for the regulation. We didn't think about reserve areas.

Hardiman: Would V'lent, Joel, Joe, and Bob be willing to look at whether a more robust Chesapeake Bay carve out is needed?

Yes.

Colin: Regulation is divided into four parts. Could we have a group look at Part I, another group for performance (Part II and Part IV), and another about O&M (Part III). Each group could report back to main group. Need to get a date to give input to the Department.

Lerch: Need a deadline for February for sub-groups to report back.

Hardiman: February 26 deadline? Schedule meeting for early March, March 19 is tentative date to meet for the advisory committee.

Pinnix: Is that enough time before we go to the Board of Health?

Evanylo: Sounds different than other regulatory regulations? What's purpose of subgroups?

Hardiman: Emergency regulation is the focus for permanent regulation. Sub-groups make comments on additions/deletions for permanent regulations, then bring their comments to the full committee, and then VDH can use that information to propose permanent regulations.

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Knapp: We formed a stakeholder advisory committee, not a technical advisory committee for the emergency regulations. Do you want a more technical group to provide input on the regulation?

Hardiman: Let's establish committees:

Part I: Joe, Bob, Joel, V'lent (lead)

Part II/IV: Joel, Colin (lead), Mike, Ray, Vincent, Greg

Part III: Jim Pyne, Pete, Bob, Colin, David, Bill

Hardiman will participate in each of the committees, will ask the subcommittees will get together, get organized as quickly as possible so that you can report back by the 2/26 for a March 19 meeting.

#3: Recording documents problems

Rob Wadsworth: mass confusion trying to get documents recorded, everyone has there own way to record, is there a standard way to record, talked to clerk of courts, they will take up at the next board meeting, Dwayne will be the agency contact for that. Do the clerks need examples? I gave them some information. They have Dwayne's contact information.

Knapp: We developed boiler plate language, then staff were encouraged to work with each county, it has been coolly received and there are consistency issues with the recordation document.

Mike: I brought this up about a year ago, seems maybe more relevant now, I looked in SHDR for things that address the renewal of permits, fees, best language in the AOSE implementation policy, if it is about to expire, can be renewed for 18 months, pretty simple process. In NOVA (northern Virginia), finding that in 9 out of 10 cases, banks own the lots, builder builds house, doesn't account for person who is going to buy the house, builder has land holding company and then a purchaser, title of property may change 2-3 times, regulation says permit is null and void if owner changes. VDH must re-issue a permit, have to change everything to the owner, it's a \$300-400 process to do that. I think this was a rule in place when HD was issuing permits, HD didn't want to go through the resources for transfer of property, seems like we need to have a way to keep permits valid through a normal business cycle. It's the homeowners that are upset about this. It's the owner of the property that is responsible for everything; it's not something that can be taken likely,

Knapp: The basis of non-transferability goes back a long way. Backlogs, norm to obtain a construction permit and used as the basis for trading the property. The legislature wanted us to reduce our resources in that area, permits only good for 18 months, owners encouraged to get construction permit when intending to build, wanted to crack down on construction permits,

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Mike: If you develop a form between owner and operator, and builder owns lot for owner of record, builder gets OP and sells next day to the occupant, the real owner. Getting a relationship form will be useless before the OP is issued.

Knapp: If builder names the operator, then the occupants still have relationship with the operator. The troubling part is the construction permit, there can be complicated relationships, couple buys lot, sells to builder, builder builds house, sells back to owner, there is a real problem there.

Pinnix: Similar issue, I do set of plans for Clayton Homes, they are not the permittee, the lot holder, we do permit in lot owner's name, plans drawn up in Clayton Homes' name. Instead of requiring designer to submit new plans under a new name, why can't we reference the prior plans? Maybe we need permit transfer fee. That would work better. Get into nonsensical paperwork exercise.

Fridley: Issue permit based on existing certification from onsite soil evaluator.

Knapp: Our interest is to issue permits for things going into the ground. We'll take a look at it. "Transfer option for ready to build." We'll look into it.

Bob Hicks introduced Peter Basanti and Marcia Degen as new employees of the Office of Environmental Health Services.

Duke Price: Fast track regulation update. Two pieces, closed loop geothermal wells, permit them through "express permitting" and "well yield and storage." Simple changes, non-controversial, fast track, they are under executive review.

Knapp: Schedule of civil penalties in same spot, moved to Secretary's office for review, waiting on final review, One more regulation action, indemnification fund, waiting on final approval, procedures for filing and review. Some time limits in there.

Pinnix: For everybody who is new, we did draft and approve rules of order, tends to be informal, but there have been times where we got into contentious issues for rules of order, they do exist and good idea that everyone gets a copy in case they are needed.

Knapp: I'll make sure they are included in the next meeting..

Next meeting is March 19, was scheduled to be at DPOR.

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### **Appendix I:**

## Sewage Handling and Disposal/Authorized Onsite Soil Evaluators Advisory Committee Meeting

DRAFT Agenda

**December 11, 2009** 

10:00 AM Richmond, Virginia

#### Administration

- Call to Order
- Approve Agenda
- Review and Approve Minutes
  September 18, 2009 Meeting

### **New Business**

- 1. Emergency Regulations for Alternative Onsite Sewage Systems
  - 1. Status Report (VDH staff)
  - 2. Staff report on the regulations as filed
    - 1. Changes from the regulations as published for comment
    - 2. Review of substantive requirements
  - 3. Attorney General Mims opinion re: HB1788 (VDH staff)
  - 4. Discussion (Bob Lee): I would like to see a portion of the agenda devoted to implementation of the emergency regulations by VDH and outside practitioners (operators), training needed and provided, process for collecting fee, timing, compliance monitoring, and enforcement.
- 2. What process should VDH use for development of the permanent regulations for alternative systems?
- 3. Discussion/decision: Problems with recording documents for alternative systems (Rob Wadsworth?)
- 4. Update on other regulatory actions:
  - 1. Private Well Regulations (Duke Price)
  - 2. Civil Penalties (Allen)
  - 3. Indemnification Fund (Dwayne Roadcap)

### **Old Business**

### Adjourn

- 2:00 pm

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Appendix II:

# **SUMMARY OF CHANGES TO VDH EMERGENCY REGULATIONS 12 VAC 5-613**

Proposed Regulation	Final Regulation
Definition: "Ammonia nitrogen"	Deleted: not used in reg
Definition: "Ammonium nitrogen"	Deleted: not used in reg
Definition: NA	Added: Definition for "Division" for clarity
Definition: "Effluent"	Modified: to include treatment systems
Definition: NA	Added: Definition for "General approval" for clarity
Definition: NA	Added: Definition for "Limiting feature" for clarity
Definition: NA	Added: Definition for "MGD" for clarity
Definition: "Nitrate nitrogen"	Deleted: not used in reg
Definition: "Nitrite nitrogen"	Deleted: not used in reg
Definition: "Project area"	Modified: for clarification and completeness
Definition: NA	Added: Definition for "Project area boundary" for clarification
Definition: "Reportable incident"	Modified: deleted 'loss of power' in response to comments
Definition: "Saturated hydraulic conductivity"	Modified: replaced 'ability' with 'capacity' in response to comments
Definition: "Secondary effluent"	Deleted: replaced with "Treatment Level 2 Effluent" to reflect comments and for clarification
Definition: "Secondary treatment"	Deleted: not used in reg
Definition: "Sewage Handling and Disposal Regulations"	Modified: deleted term "SHDR"
Definition: "Tertiary Effluent"	Deleted: replaced with "Treatment Level 3 Effluent" to reflect comments and for clarification
Definition: "Total Kjeldahl nitrogen"	Deleted: not used in reg
Definition: "Total nitrogen"	Modified: for clarity and in response to comments
Definition: "Treatment train"	Deleted: to avoid confusion
Definition: "Treatment unit"	Modified: to add "or treatment system" instead of device to recognize more complex 'systems' that utilize multiple treatment units
Definition: "Vertical separation"	Modified: changed 'limiting condition' to 'limiting feature' in response to comments and for consistency
Section 30.D.	Moved to 30.B. to be sequential (part 2 discussion prior to part 3)
Section 30.B	Moved to 30.C. to accommodate above reordering
Section 30.C.	Moved to 30.D. to accommodate above reordering
Section 30.F. referenced 70.A.12	Modified to reference 70.A.11. to reflect other modifications
Section 40: relationship to other regulations	Modified for clarification in response to comments that this chapter modifies requirements for systems designed to disperse TL-2 or TL-3 effluent. For septic effluent, the existing Table 5.4 of the Sewage Handling and Disposal regulations still applies. For clarity, the reg citation was replaced with the reg name.
Section 60.A	Modified to clarify that an operator is need when the facility is operational

Section 60	Added Section 60.C. to note that areas delineated for
Occilor 60	nitrogen management must be legally recorded and
	protected
Section 70.A.4	Modified to include 'treatment systems' for clarity
Section 70.A.5	Modified to include treatment systems' for clarity
Section 70.A.6.	Modified to include treatment systems for clarity  Modified to include 'treatment systems' for clarity
Section 70.A.7.	Modified: The section was restructured into 7.a. and 7.b.
Section 70.A.7.	Clarified that the hydraulic loading rates were for
	pressure dosed systems and a reduction is required for
	gravity systems. A statement was added to remind the
	designer that the soil properties must be considered in
	determining loading rates. Modifications in response to
	comments and for clarity.
Section 70 Table 1	Modified: Table was modified in response to comments
	to eliminate loadings based on a percent of Ksat. Perc
	rates were used to reflect current practice but are not
	intended to preclude the use of Ksats. In addition,
	hydraulic loading rates were set for TL-2 and TL-3
	effluent based on EPA recommendations and GMP 147
Section 70.A.8	Moved in part to 70.A.7.b and modified to reflected
	deletion of Table 2
Section 70.A.8. Table 2	Deleted: The addition of effluent requirements to Table 1
	(TL-2 and TL-3) made this table redundant.
Section 70.A.9.	Renumbered to 70.A.8. and modified to clarify that septic
	tank effluent systems must have a minimum of 12 inches
	of soil cover.
Section 70.A.10	Renumbered to 70.A. 9 and modified to delete 'tertiary
0 11 =0.4.44	effluent' and substitute "TL-3" and to correct typos.
Section 70.A.11	Renumbered to 70.A.10. Clarifying language added for
	distinction between small and large AOSS requirements
	for mounding calculations. Also added that a requirement
	to monitor for degree of saturation may be required for
Section 70.A.12	large AOSS.
Section 70.A.12	Renumbered to 70.A.11. Clarifying language added in
	response to comments. Set fecal limit at bottom of vertical boundary set. When disinfection required,
	effluent prior to soil dispersal is 200 col/100 ml. Also
	clarified that chlorine contact time is at average daily flow.
Section 70.A.13	Renumbered to 70.A.12.
Section 70.A.13 and Table 3	Table 3 renumbered to Table 2. Table modified to correct
Occion 70.A. 13 and Table 3	typos; to remove BOD, TSS, and Ammonia-N limits; to
	add effluent quality for each site conditions; and to add an
	organic loading rate maximum for the most sensitive site
	conditions.
Section 70.A.14 and Table 4	Deleted in response to comments.
Section 70.A.15.	Renumbered to 70.A.13. Modified to reflect TN instead of
	nitrate-N to recognize potential conversion of most N
	forms to nitrate-N. Clarifying language added to note
	types of methods that may be considered for N
	management
Section 70.A.16.	Deleted due to deletion of Table 4
Section 70.A.17.	Renumbered to 70.A.14
Section 70.A.18.	Renumbered to 70.A.15

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Section 70.A.19. Section 70.A.20.	Renumbered to 70.A.16 Renumbered to 70.A.17
Section 70.A.20.	
Section 70	Added new 70.A.18. to allow for recognition of N reducing designs that may allow special funding
Section 70	Added new 70.A.19, to address fill material used to
Section 70	increase vertical separation in dispersal systems
Section 70.B.	Modified for clarity in response to comments
Section 70.C.	Added Code reference
Section 70.C.3.	Modified to clearly allow both perc rate and Ksat for
Section 70.0.3.	designs
Section 70.D.	Modified to reflect new terminology for effluent quality,
Coolion 7 o.B.	TL-2 and TL-3.
Section 70	Added Section 70.E. to note requirement for PE seal or
	for certification statement from the designer that a PE is
	not required.
Section 80.A.	Renumbered to 80.C. and corrected typo of 'permit' to
	'chapter'
Section 80.B.	Renumbered to 80.D. and modified language for clarity.
	Eliminated monitoring for TSS and TN in response to
	comments. Changed date for submittal of data from 10 <sup>th</sup>
	to the 15 <sup>th</sup> of the month in response to comments.
Section 80.C.	Renumbered to 80.E. and modified language for clarity.
Section 80.D.	Renumbered to 80.B. and eliminated term 'train' and
	substituted at the end of all treatment to specify point of
	sampling effluent.
Section 80.E.	Renumbered to 80.A. Moved to clarify upfront that no
	effluent monitoring is required for septic tank effluent.
Section 80.F. and Table 5	Renumbered Table to Table 3. Modified Table to reflect
	monitoring for Large AOSS's only. Modified flow
	monitoring requirement to 'measured' for 0.011-0.04
	MGD facilities in response to comments. Added
Section 90	definition for 'HC"  Modified title for clarity
Section 90.A. and Table 6	Renumbered Table to Table 4. Clarified that tests in
Section 90.A. and Table 0	Table 4 are for facilities up to 0.04 MGD and only for
	those not discharging septic tank effluent.
Section 90	Added 90.B. to note that for facilities larger than 0.04
Coulon 30	MGD, process control monitoring shall be in accordance
	with the O&M manual
Section 100.A.	Modified term from 'must' to 'shall'
Section 100.C.	Modified term from 'must' to 'shall'
Section 100.C.3.	Clarified that log is for normal maintenance/repair
	activities
Section 100.C.6.	Eliminated 'time' report provided to owner as a record in
	response to comments
Section 100.E.	Modified term from 'must' to 'shall'
Section 110	Modified language for clarity to note pumping solids from
	a septic tank or treatment unit
Section 120.B.	Modified owner responsibilities to include having an
	operator to also 'maintain' the facilities, not just operate,
	in response to comments
Section 120.F.	Added term 'for the AOSS' to clarify that the onsite O&M
	must be facility specific

Section 130 and Table 7	Renumbered Table 7 to Table 5. Modified table from gpd
	to MGD and noted that the Table is 'minimum'
	frequencies of operator visits.
Section 140.A.	Modified language to recognize 'recommended'
	frequencies of attendance in Sewage Collection and
	Treatment Regulations (not mandatory)
Section 140.B.	Eliminated reference to Table 1 in the Sewage Collection
	and Treatment Regulations and modified term of
	'Operation and maintenance' to 'O&M'
Section 140.C.	Eliminated reference to Table 1 as above and spells out
	'Sewage Collection and Treatment Regulations'
Section 140	Added Section 140.D. in response to comments. Allows
	for a reduction in staffing requirements for automated
	treatment systems with approval by Division Director
Section 150.A.	Eliminated term 'hydraulic and organic' and replaced with
	the generic 'loading rates'
Section 150.B.	Replaced 'operation and maintenance' with 'O&M'
Section 150.C.	Modified language for clarity
Section 150.C.1.	Replaced 'sewage system' with 'AOSS' for clarity
Section 150.C.5	Replaced 'sewage system' with 'AOSS' for clarity
Section 150.C.6	Renumbered to 150.C.7
Section 150	Added new 150.C.6 which states that the O&M manual
	will contain the process control testing requirements for
	systems >0.04 MGD
Section 160.A.	Modified language to be consistent with Section 90
Section 170	Modified term from 'must' to 'shall'
Section 170.D.	Modified structure to capitalize subheadings
Section 170.C[2], D[2], E, F	Reordered sections to E, F, G, and H to continue list
Section 170.D.[2]	Reordered as noted to F. Changed 'tests' to
	measurements and sampling to be consistent with
	Section 90
Section 170.E.	Reordered as noted to G. Modified to reflect only the
	laboratory name who will analyze samples as field
	measurements are included in new F.
Section 170.F.	Reordered as noted to H.
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